



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

## In Re Application of:

Froehler, et al.

Serial No.: 10/024,818

Group Art Unit: Not Yet Assigned

Filing Date: December 18, 2001

Examiner: Not Yet Assigned

**For:** Enhanced Triple-Helix And Double-Helix Formation With Oligomers Containing Modified Pyrimidines

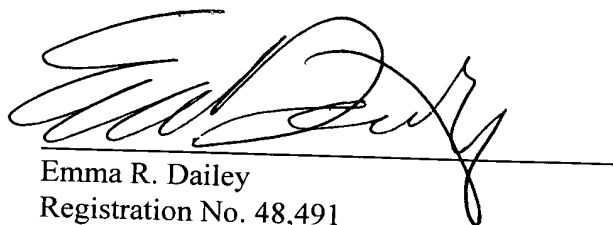
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- ☒ I hereby state that the submission filed in accordance with 37 CFR §1.821(g) does not include new matter.
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- ☐ I hereby state that the amendments, made in accordance with 37 CFR §1.825(a), included in the substitute sheet(s) of the Sequence Listing are supported in the application, as filed, at pages \_\_\_\_\_. I hereby state that the substitute sheet(s) of the Sequence Listing does (do) not include new matter.
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Date: June 18, 2002



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One Liberty Place - 46th Floor  
Philadelphia PA 19103  
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Facsimile: (215) 568-3439



## SEQUENCE LISTING

<110> Froehler, Rick  
Wagner, Rick  
Mateucci, Mark  
Jones, Robert J.  
Gutierrez, Arnold J.  
Pudlo, Jeff

<120> Enhanced Triple-Helix And Double-Helix Formation With Oligomers Containing Modified Pyrimidines

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<141> 2001-12-18

<150> 08/599,738

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<220>
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<220>
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<220>
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<220>

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<220>  
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<220>  
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<400> 23  
 nngnngnnnn nannanannn aan

23

<210> 24  
 <211> 9  
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 <213> Artificial Sequence

<220>  
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<220>  
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<400> 24  
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9

<210> 25  
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<220>  
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<220>  
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<220>
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<220>
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<220>
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<220>
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<400> 25
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20

<210> 26
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
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<400> 26
gcctcctcac tacttctgga
20

<210> 27
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic construct

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<400> 27  
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<210> 28  
<211> 15  
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<220>  
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<400> 28  
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<210> 29  
<211> 15  
<212> DNA  
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<220>  
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<220>  
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<220>  
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<220>  
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<222> (8)..(8)  
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<220>  
<221> misc\_feature  
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<223> This position is C'= 5-methyl-2'-deoxycytidine

<220>  
<221> misc\_feature  
<222> (11)..(12)  
<223> This position indicates a 3'-thioformacetal

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linkage (3', 5')

<220>
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<222> (13)..(14)
<223> This position indicates a 3'-thioformacetal
linkage (3', 5')

<400> 29
tntntntntn ttttt

<210> 30
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic construct

<220>
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<220>
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<223> This position is C'= 5-methyl-2'-deoxycytidine

<220>
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<223> This position is C'= 5-methyl-2'-deoxycytidine

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<223> This position is U*= 5-(1-propynyl)-2'-deoxyuridine

<220>
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<220>
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<222> (12)..(13)
<223> This position is U*= 5-(1-propynyl)-2'-deoxyuridine

<220>

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<221> misc\_feature  
<222> (13)..(14)  
<223> This position indicates a 3'-thioformacetal  
linkage (3', 5')

<220>  
<221> misc\_feature  
<222> (14)..(14)  
<223> This position is U\*= 5-(1-propynyl)-2'-deoxyuridine

<400> 30  
tntntntntn nnnnt

15

<210> 31  
<211> 15  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic construct

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<220>  
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<222> (4)..(4)  
<223> This position is C'= 5-methyl-2'-deoxycytidine

<220>  
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<222> (6)..(6)  
<223> This position is C'= 5-methyl-2'-deoxycytidine

<220>  
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<222> (8)..(8)  
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<220>  
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<222> (10)..(10)  
<223> This position is C'= 5-methyl-2'-deoxycytidine

<220>  
<221> misc\_feature  
<222> (11)..(11)  
<223> This position is U\*= 5-(1-propynyl)-2'-deoxyuridine

<220>  
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<222> (11)..(12)  
<223> This position indicates a formacetal  
linkage (3', 5')

<220>  
<221> misc\_feature  
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<223> This position is U\*= 5-(1-propynyl)-2'-deoxyuridine

<220>  
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<222> (13)..(14)  
<223> This position indicates a formacetal  
linkage (3',5')

<220>  
<221> misc\_feature  
<222> (14)..(14)  
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<400> 31  
tntntntntn nnnnt

15

<210> 32  
<211> 15  
<212> DNA  
<213> Artificial Sequence

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<220>  
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<220>  
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<220>  
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5-(2-Pyridinyl)-2'-Deoxyuridine

<400> 32  
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15

<210> 33  
<211> 15  
<212> DNA

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 5-(2-Pyridinyl)-2'-Deoxyuridine  
 <220>  
 <221> misc\_feature  
 <222> (15)..(15)  
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 5-(2-Pyridinyl)-2'-Deoxyuridine

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tntntnnnnn ntntn 15

<210> 34  
<211> 15  
<212> DNA  
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<400> 34  
tntntntntn ttttt 15

<210> 35  
<211> 15  
<212> DNA  
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<220>  
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<220>  
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<220>  
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5-(2-Thienyl)-2'-Deoxyuridine

<400> 35  
tntntntntn nnnnn 15

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<210> 36
<211> 15
<212> DNA
<213> Artificial Sequence

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<220>
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<220>
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5-(2-Thienyl)-2'-Deoxyuridine

<220>
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<220>
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<222> (9)..(9)
<223> This position is U superscript T=
5-(2-Thienyl)-2'-Deoxyuridine

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5-(2-Thienyl)-2'-Deoxyuridine

<220>
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<223> This position is U superscript T=
5-(2-Thienyl)-2'-Deoxyuridine

<220>
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<222> (15)..(15)
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5-(2-Thienyl)-2'-Deoxyuridine

<400> 36  
tntntnnnnn ntntn

15

<210> 37  
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<212> DNA  
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<220>  
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<222> (4)..(4)  
<223> This position is C# = Carbocyclic 5- Methyl-2' Deoxycytidine

<220>  
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<220>  
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<222> (6)..(6)  
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<220>  
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<220>  
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<220>  
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<220>  
<221> misc\_feature

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<220>  
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<400> 37  
 nnnnnnnnnn nnnnnn 15

<210> 38  
 <211> 17  
 <212> DNA  
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<220>  
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<220>  
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<400> 38  
 tttntttntt nnttttt 17

<210> 39  
 <211> 17  
 <212> DNA  
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<220>  
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<220>  
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<220>  
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<220>  
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<220>  
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<220>  
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<220>  
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<400> 39  
 nnnnnnnnnn nnnnnnnn 17

<210> 40  
 <211> 15  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<400> 40  
 tctctctctc ttttt 15

<210> 41  
 <211> 17  
 <212> DNA  
 <213> Artificial Sequence

<220>  
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<400> 41  
 aaagaaagga ggaaaaa 17

<210> 42  
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 <212> DNA  
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<220>  
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<400> 42  
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<210> 43  
 <211> 15  
 <212> DNA  
 <213> Artificial Sequence

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<220>
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<220>
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<220>
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<223> This position is C'= 5-methyl-2'-deoxycytidine

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<223> This position is 5-Methyl-2'-O-allyluridine

<220>
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<223> This position is T'= 5-Methyl-2'-)-allyluridine

<220>
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<220>
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<400> 43
tntntntntn ttttt

<210> 44
<211> 15
<212> DNA
<213> Artificial Sequence

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<220>
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15

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<222> (2)..(2)
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<220>
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<223> This position is c'= 5-methyl-2'-deoxycytidine

<220>
<221> misc_feature
<222> (6)..(6)
<223> This position is c'= 5-methyl-2'-deoxycytidine

<220>
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<222> (8)..(8)
<223> This position is c'= 5-methyl-2'-deoxycytidine

<220>
<221> misc_feature
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<223> This position is c'= 5-methyl-2'-deoxycytidine

<220>
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<400> 44
tntntntntn ttttt

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15

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<210> 45
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<212> DNA
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<220>
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<220>
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<220>
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<223> This position is C'= 5-methyl-2'-deoxycytidine

<220>
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<222> (8)..(8)
<223> This position is C'= 5-methyl-2'-deoxycytidine

<220>

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<221> misc_feature
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<220>
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<400> 45
tntntntntn ttttt
15

<210> 46
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
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<220>
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<220>
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<222> (4)..(4)
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<220>
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<220>
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<220>
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<400> 46
tntntntntn ttttt
15

<210> 47
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
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<220>  
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<220>  
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<220>  
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<220>  
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<400> 47  
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15

<210> 48  
<211> 15  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic construct

<220>  
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<220>  
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<223> This position is C superscript X= 5-(1-Propynyl)-2'-O-Allylcytidine

<220>  
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<223> This position is C superscript X= 5-(1-Propynyl)-2'-O-Allylcytidine

<220>  
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<223> This position is C superscript X= 5-(1-Propynyl)-2'-O-Allylcytidine

<220>  
<221> misc\_feature  
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<400> 48  
tntntntntn ttttt

15

<210> 49  
<211> 15  
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<400> 49  
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<210> 50  
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<212> DNA  
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<220>  
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<220>  
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<220>  
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<220>  
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<220>  
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<220>  
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<220>  
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<223> This position is C'= 5-methyl-2'-deoxycytidine

<220>  
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<220>  
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<400> 50  
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28

<210> 51  
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<220>  
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<220>  
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<220>  
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<220>  
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<220>
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<220>
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<220>
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<220>
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<220>
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<220>
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<223> This position is U\*= 5-(1-propynyl)-2'-deoxyuridine

<400> 51  
nnnnnnnnnn nnnnnnnnnn nnn

23

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<220>  
<223> Synthetic construct

<400> 52  
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32

<210> 53  
<211> 32  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic construct

<400> 53  
tctctttttt cttctctttc tttaaaaaaa aa

32

<210> 54  
<211> 15  
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<220>  
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<220>  
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<400> 54  
nnnnnnnnnn nnnnn

15